ORAL ARGUMENT NOT YET SCHEDULED

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

Nos. 17-1101; 17-1106; 17-1107 (consolidated)

NEW JERSEY BOARD OF PUBLIC UTILITIES, *ET AL.*,
Petitioners,

v.

FEDERAL ENERGY REGULATORY COMMISSION,
Respondent.

ON PETITIONS FOR REVIEW OF ORDERS OF THE FEDERAL ENERGY REGULATORY COMMISSION

FINAL BRIEF OF INTERVENORS PJM INTERCONNECTION, L.L.C.; APPIAN WAY ENERGY PARTNERS; BOSTON ENERGY TRADING AND MARKETING LLC; DC ENERGY, LLC; ELLIOTT BAY ENERGY TRADING, LLC; EXELON CORPORATION; NRG POWER MARKETING, LLC; PSEG ENERGY RESOURCES & TRADE LLC; PSEG POWER LLC; PUBLIC SERVICE ELECTRIC & GAS COMPANY; VITOL INC., IN SUPPORT OF RESPONDENT

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CERTIFICATE AS TO PARTIES, RULINGS, AND RELATED CASES

A. Parties and Amici

To counsel's knowledge, the parties and intervenors before this Court and before the Federal Energy Regulatory Commission in the underlying agency docket are as stated in the Joint Opening Brief of Petitioners.

B. Rulings under Review

1. Order Addressing Filing and Issues Raised at Technical Conference, *PJM Interconnection, L.L.C.*, 156 FERC ¶ 61,180 (2016), JA440; and

2. Order on Rehearing and Compliance, *PJM Interconnection, L.L.C.*, 158 FERC ¶ 61,093 (2017), JA860.

C. Related Cases

This case has not previously been before this Court or any other court. Counsel is not aware of any other related cases within the meaning of D.C. Circuit Rule 28(a)(1)(C).

/s/ Matthew E. Price
Matthew E. Price
Counsel for Exelon Corporation

CORPORATE DISCLOSURE STATEMENTS

PJM Interconnection, L.L.C. ("PJM") is a limited liability company ("L.L.C.") organized and existing under the laws of the State of Delaware. PJM is an independent regional transmission system operator authorized by the Federal Energy Regulatory Commission ("FERC") to administer an Open Access Transmission Tariff, operate energy and other markets, and otherwise conduct the day-to-day operations of the bulk power system of a multi-state region. *See Pennsylvania-New Jersey-Maryland Interconnection*, 81 FERC ¶ 61,257 (1997), *reh'g denied*, 92 FERC ¶ 61,282 (2000), *modified sub nom. Atl. City Elec. Co. v. FERC*, 295 F.3d 1 (D.C. Cir. 2002).

Under Delaware law, the members of an L.L.C. have an "interest" in the L.L.C. *See* Del. Code Ann. tit. 6, § 18-701 (2016). PJM members do not purchase their interests or otherwise provide capital to obtain their interests. Rather, the PJM members' interests are determined pursuant to a formula that considers various attributes of the member, and the interests are used only for the limited purposes of: (i) determining the amount of working capital contribution for which a member may be responsible in the event financing cannot be obtained; and (ii) dividing assets in the event of liquidation. PJM is not operated to produce a profit, has never made any distributions to members, and does not intend to do so (absent dissolution). In addition, "interest" as defined above does not enter into governance of PJM and there

are no entities that have a 10% or greater voting interest in the conduct of any PJM affairs.

Respectfully submitted,

/s/ *Paul M. Flynn*
Paul M. Flynn
Counsel to PJM Interconnection, L.L.C.

Appian Way Energy Partners, LLC ("Appian Way") is a Delaware limited liability company and is privately held. Appian Way Energy Partner, LLC is General Partner to Appian Way Energy Opportunity Master Fund, LP a Delaware limited partnership. Appian Way Energy Opportunity Master Fund, LP is the sole member of Appian Way Energy Partners Mid-Atlantic, LLC a Delaware limited liability company. No publicly-held company has a 10% or greater ownership interest in any of the above referenced entities. As relevant to this case, Appian Way Energy Partners Mid-Atlantic, LLC is a participant in the markets administered by the PJM Interconnection, L.L.C.

Respectfully submitted,

/s/ Jeffery S. Dennis
Jeffery S. Dennis
Counsel for Appian Way

Boston Energy Trading and Marketing LLC ("Boston Energy") is a Delaware limited liability company with its principal office in Boston Massachusetts, that engages in electric power marketing by placing market bids and entering into bilateral contracts on behalf of generating facilities for the supply and purchase of energy throughout the United States. Boston Energy is a wholly-owned subsidiary of NRG Energy, Inc., a publically-held corporation. At this time, only NRG Energy, Inc. (NYSE: NRG) has issued shares to the public. Boston Energy has not issued shares to the public. No publicly-held company has a 10% or greater ownership interest in NRG Energy, Inc.

Respectfully submitted,

/s/ Cortney Madea
Cortney Madea
Counsel for Boston Energy

DC Energy, LLC is a Delaware limited liability company and a wholly-owned subsidiary of DC Energy Holdings, LLC. DC Energy Holdings, LLC is a privately-owned Delaware limited liability company majority-owned by Dean Ventures Holdings, LLC, a privately-owned Delaware limited liability company. No publicly-held company has a 10% or greater ownership interest. As relevant to this case, DC Energy, LLC is a participant in the markets administered by the PJM

Interconnection, L.L.C. and a power marketer that operates under a FERC-approved market-based rate tariff.

Respectfully submitted,

/s/ Joelle K. Ogg
Joelle K. Ogg
Counsel for DC Energy, LLC

Elliott Bay Energy Trading, LLC is a Washington limited liability company and a wholly-owned subsidiary of Elliott Bay Energy, LLC. Elliott Bay Energy, LLC is a privately-owned Delaware limited liability company that has no parent company, and no publicly-held company has a 10% or greater ownership interest. As relevant to this case, Elliott Bay Energy Trading, LLC is a PJM Market Participant that participates in PJM's financial transmission rights auctions.

Respectfully submitted,

/s/ Stuart A. Caplan
Stuart A. Caplan
Counsel for Elliott Bay Energy Trading, LLC

Exelon Corporation states as follows under Rule 26.1 of the Federal Rules of Appellate Procedure and Rule 26.1 of the Rules of this Court: Exelon Corporation is a utility and generator of electricity and is a publicly traded company. It has no parent company, and no publicly traded company owns 10 percent or more of its shares.

Respectfully submitted,

/s/ Matthew E. Price
Matthew E. Price
Counsel for Exelon Corporation

NRG Power Marketing LLC ("NRG Power Marketing") is a Delaware limited liability company with its principal office in Princeton, New Jersey, that engages in electric power marketing by placing market bids and entering into bilateral contracts on behalf of generating facilities for the supply and purchase of energy throughout the United States. NRG Power Marketing is a wholly-owned subsidiary of NRG Energy, Inc., a publicly-held corporation. At this time, only NRG Energy, Inc. (NYSE: NRG) has issued shares to the public. NRG Power Marketing has not issued shares to the public. No publicly-held company has a 10% or greater ownership interest in NRG Energy, Inc.

Respectfully submitted,

/s/ Cortney Madea
Cortney Madea
Counsel for NRG Power Marketing

Public Service Electric and Gas Company ("PSE&G"); PSEG Power LLC ("PSEG Power") and PSEG Energy Resources & Trade LLC ("PSEG ER&T") (collectively the "PSEG Companies") are each wholly owned, direct or indirect subsidiaries of Public Service Enterprise Group Incorporated ("PSEG").

The principal and executive offices of PSEG are located at 80 Park Plaza, Newark, New Jersey 07102. PSEG subsidiaries are engaged in, among other things, the generation of electric energy, and the transmission, distribution and sale of electricity and natural gas through its subsidiaries.

PSE&G, a wholly owned subsidiary of PSEG, is a public utility company organized under the laws of the State of New Jersey that serves approximately 2.2 million electric customers and 1.8 million gas customers in a service area that covers approximately 2,600 square miles running diagonally across New Jersey.

PSEG Power LLC, a Delaware limited liability company, is a wholly owned, direct subsidiary of PSEG. PSEG Power is a multi-regional energy supply company that integrates the operations of its merchant nuclear and fossil generating assets with its power marketing businesses through competitive energy sales in well-developed energy markets and fuel supply functions primarily in the Northeast and Mid-Atlantic United States through its principal wholly owned, direct subsidiaries: (i) PSEG Nuclear LLC ("PSEG Nuclear"), which operates nuclear generating stations; (ii) PSEG Fossil LLC ("PSEG Fossil"), which operates a portfolio of natural gas, coal and oil-fired electric generating units, (iii) PSEG Power Ventures LLC ("PSEG Power Ventures"), which develops utility-scale solar facilities outside PSE&G's service territory through its subsidiary PSEG Solar Source LLC ("PSEG

Solar Source") and operates the Kalaeloa Cogeneration Plant, and (iv) PSEG ER&T which is described below

PSEG ER&T, an indirect subsidiary of PSEG, manages PSEG Power's generation portfolio and basic gas supply service, the purchase of fuel, and buys and sells electric and gas commodity.

PSEG has publicly-held common stock and publicly-held debt securities outstanding. PSE&G has publicly-held debt securities outstanding. PSEG Power has publicly-held debt securities outstanding.

Respectfully submitted,

/s/ Cara J. Lewis
Cara J. Lewis
Counsel for PSE&G, PSEG Power, and PSEG ER&T

Vitol Inc. is a Delaware corporation and a privately-held, wholly-owned subsidiary of Vitol US Holding Co.. Vitol US Holding Co. is a privately-held Delaware corporation and a wholly-owned subsidiary of Euromin Inc.. Euromin Inc. is a privately-held Delaware corporation and is wholly-owned by Vitol Holding B.V., which is a privately-owned Dutch holding company based in Rotterdam, the Netherlands. Vitol Holding B.V. is the parent company in the Vitol group of companies from an operational perspective and the group's financials are consolidated at that level. As the group of companies are privately-held by its

employees around the globe, there is a structure of non-operating entities that solely reflect ownership in Vitol Holding B.V., of which no individual shareholder owns more than 5.00 percent. As relevant to this case, Vitol Inc. is a participant in the markets administered by the PJM Interconnection, L.L.C. and a power marketer that operates under a FERC-approved market-based rate tariff.

Respectfully submitted,

/s/ Jeffery S. Dennis
Jeffery S. Dennis
Counsel for Vitol Inc.

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TABLE OF AUTHORITIES*

CASES

* Authorities upon which we chiefly rely are marked with an asterisk.

STATUTES

ADMINISTRATIVE RULINGS

OTHER AUTHORITIES

GLOSSARY

ARR	Auction Revenue Rights
FERC or Commission	Federal Energy Regulatory Commission
FTR	Financial Transmission Rights
Initial Order	*PJM Interconnection, L.L.C.*, 156 FERC ¶ 61,180 (2016)
Elliott Bay Answer	*PJM Interconnection, L.L.C.*, FERC Dkt. No. ER16-121-000 et al., Elliott Bay Answer (Dec. 8, 2015)
Elliott Bay Post-Technical Conference Comments	*PJM Interconnection, L.L.C.*, FERC Dkt. No. ER16-121-000 et al., Elliott Bay Post-Technical Conference Comments (Mar. 15, 2016)
J. Aron & Co. Comments	*PJM Interconnection, L.L.C.*, FERC Dkt. No. ER16-121-000 et al., Mot. to Intervene and Comments of J. Aron & Co. (Nov. 9, 2015)
PJM Filing	*PJM Interconnection, L.L.C*, FERC Dkt. No. ER16-121-000 et al., PJM Transmittal Letter (Oct. 19, 2015)
PJM	PM Interconnection, L.L.C.
Reh'g Order	*PJM Interconnection, L.L.C.*, 158 FERC ¶ 61,093 (2017)
Technical Conference Order	*PJM Interconnection, L.L.C.*, 153 FERC ¶ 61,344 (2015)

Technical Conference Transcript	*PJM Interconnection, L.L.C*, FERC Dkt. No. ER16-121-000 et al., Transcript of Technical Conference (Feb. 4, 2016)

INTRODUCTION

This case concerns "financial transmission rights" ("FTRs"), a product subject to the jurisdiction of the Federal Energy Regulatory Commission ("FERC" or "Commission"). FTRs allow electricity market participants to hedge against certain transmission constraints, known as "congestion," that prevent the free flow of electricity across the transmission system needed to support competitive electricity markets managed by PJM Interconnection, L.L.C. ("PJM"). For many years, FTRs in the PJM region have suffered from a market design flaw that affected their ability to provide this intended hedge. In the orders below, FERC diagnosed the cause of that problem and developed a comprehensive solution. This Court affords significant deference to FERC's expert judgment on matters related to rate design, and here FERC's findings were robustly supported by record evidence. The Petitions for Review should be denied.

BACKGROUND

I. FTRs Are Hedges Against Day-Ahead Congestion.

In PJM, the locational marginal price represents the cost of making an additional unit of electricity available at a particular location in the grid. *See Black Oak Energy, LLC v. FERC*, 725 F.3d 230, 233-34 (D.C. Cir. 2013). That locational marginal price includes various components, including the cost of electricity itself

as well as a "congestion" cost.[1] *Id.* The cost of electricity is set through a day-ahead market, in which generators of electricity enter offers to sell electricity through what is referred to as a "single clearing price" auction. *See id.* at 233. Under this design, generators offer the lowest price at which they can provide energy, and PJM selects the amount of generation necessary to satisfy demand. *See generally Hughes v. Talen Energy Mktg., LLC*, 136 S. Ct. 1288, 1293 (2016). In addition to the day-ahead market, PJM operates a real-time market in which electricity is either bought or sold to account for unexpected deviations from the day-ahead bid supply and demand, due to causes including generation outages, transmission lines going down, and higher or lower than expected energy demand. *See Black Oak*, 725 F.3d at 233; *Wis. Pub. Power, Inc. v. FERC*, 493 F.3d 239, 245-46 (D.C. Cir. 2007) (per curiam) ("*WPPI*").

In a hypothetical market in which energy can travel freely without any constraints on the transmission system, the locational marginal price at each node would be essentially the same, reflecting the market clearing price for electricity. *See Hughes*, 136 S. Ct. at 1293. However, various transmission constraints—*i.e.*, limitations on the amount of energy that can be carried by a particular transmission line—result in the second component of the locational marginal price, namely the

[1] The locational marginal price also includes marginal cost of transmission line losses. *See Black Oak*, 725 F.3d at 233-34. These losses are not at issue in this proceeding and thus are not further discussed herein.

"congestion" cost. *WPPI*, 493 F.3d at 250. A transmission constraint can require PJM to schedule a higher-cost generator to serve a particular area, resulting in a higher locational marginal price for that constrained, area. *Id.* The difference between the price where the energy is delivered (the "sink") and the price where the energy is generated (the "source") is the day-ahead congestion cost.

When PJM runs its day-ahead market, it models the transmission limitations it expects for the following day and awards day-ahead contracts to generators in light of the constraints. *See* FERC, *Energy Primer: A Handbook of Energy Market Basics* 59 (2015), https://www.ferc.gov/market-oversight/guide/energy-primer.pdf ("FERC Primer"). Day-ahead locational marginal prices differ among locations because congestion varies among the paths that electricity travels across the modeled network. *Id.* at 60.

Market participants—including load-serving entities and others who use the transmission system to deliver energy—are understandably concerned about day-ahead congestion charges because they introduce significant uncertainty into day-ahead locational marginal prices. To allay these concerns (and achieve other market design objectives), PJM and other organized wholesale electricity markets developed FTRs, through which transmission service customers can hedge their exposure to day-ahead congestion charges. *See PJM Interconnection, L.L.C.*, 153 FERC ¶ 61,344 at P.3 (2015) ("Technical Conference Order"), JA290. At their most

basic level, FTRs entitle their holder to receive the day-ahead congestion charges collected by PJM for a specific quantity of energy transmitted over a specific transmission path. *PJM Interconnection, L.L.C.*, 156 FERC ¶ 61,180 at P.6 (2016), ("Initial Order"), JA443. If congestion charges are positive over a specific path (which occurs when prices at the "source" are lower than at the "sink"), the FTR holder receives a share of the congestion revenues. Technical Conference Order, P.3 n.4, JA290. And, if congestion charges are negative (which occurs when prices at the "source" are higher than at the "sink"), the FTR holder must make a payment. *PJM Interconnection, L.L.C*, FERC Dkt. No. ER16-121-000 et al., PJM Transmittal Letter (Oct. 19, 2015) ("PJM Filing") at 3-4, JA4-5. An FTR thereby reduces the uncertainty of day-ahead congestion charges along a specific path, because any day-ahead congestion charges the holder is required to pay over a specific path will be returned through a fully-funded FTR.

PJM utilizes a multi-stage allocation and auction process to distribute FTRs. Under this process, PJM initially allocates to load-serving entities the right to an allocation of FTR auction revenue via a financial product called Auction Revenue Rights ("ARRs"). *See* Initial Order P.7, JA443.[2] Like an FTR, an ARR is

[2] PJM makes these allocations to recognize load-serving entities historic usage of the system and their contributions to the fixed costs of the transmission grid, as well as to provide them access to long-term transmission service in accordance with Section 217 of the Federal Power Act. PJM Filing at 2-3, JA3-4.

transmission path specific in that it represents a specific quantity of megawatts transmitted between two points on the grid. PJM allocates ARRs by modeling the transmission grid, taking account of planned transmission outages and other relevant factors, and with an important exception discussed below, determining which transmission paths are "simultaneously feasible." Initial Order P.9 n.8, JA444; FERC Primer 62-63. Used in this context, simultaneous feasibility means that under the modeled conditions the transmission grid could actually deliver and financially support all the energy represented by the requested set of ARRs.

PJM initially allocates ARRs directly to firm transmission service customers, typically load-serving entities. The allocation of ARRs occurs in two stages:

- In Stage 1A, PJM allocates 10-year ARRs to firm transmission service customers along paths they historically used to deliver energy to their customers. PJM allocates these ARRs in an amount representing the customer's "base demand," (*i.e.*, excluding peaks), even if such ARRs are infeasible, *i.e.*, cannot currently be supported by the transmission system. Having made these allocations, PJM then identifies transmission upgrades required to support the allocated ARRs for at least 10 years. Importantly, prior to this proceeding, PJM was required to allocate ARRs based on historical generation as it existed at the time the transmission zones joined the PJM market, *even if* changes in the interim rendered historic paths unavailable.

- In Stage 1B, PJM allocates additional 1-year ARRs to firm transmission service customers up to their peak loads, subject to system constraints.[3]

[3] Initial Order P.7, JA443 (citing PJM Operating Agreement Schedule 1, § 7.4.2(b)). In another stage of the ARR allocation process (Stage 2), not relevant here, PJM allows firm customers to adjust the paths of their allocated ARRs.

The ARR entitles the load-serving entity either to convert the ARR into the equivalent FTR for the same specific transmission path prior to the FTR auction, or receive the revenue associated with that path from the FTR auction proceeds. Initial Order P.3, JA442. Thus, an ARR holder can choose to hedge congestion costs by converting the ARR into an FTR, or choose to receive the auction revenue associated with the path and pay whatever congestion costs are incurred.

II. FTR Underfunding Is Caused by Real-Time Imbalances that Result in Balancing Congestion and Allocation of Infeasible ARRs.

FTRs can only serve as an effective hedge of day-ahead congestion costs if PJM pays an FTR holder the full amount of the congestion charges it collects on the transmission path reflected in the FTR. If PJM is unable to pay FTR holders the full value of the congestion charges collected, then the hedge fails because the holder of the FTR ends up paying congestion charges (and, moreover, being exposed to uncertain prices) that the FTR does not recompense. Unfortunately, PJM's inability to pay FTR holders in full—known as FTR "underfunding" or "revenue inadequacy"—has been a persistent problem in PJM, amounting to $1.4 billion between 2010 and 2014. PJM Filing at 14 (Table 1); *see also PJM Interconnection, L.L.C.*, FERC Dkt. No. ER16-121-000 et al., Mot. to Intervene and Comments of J. Aron & Co. (Nov. 9, 2015) ("J. Aron & Co. Comments") at 17 n.30, JA109. When underfunding occurs, the revenue shortfall is allocated pro rata to all holders of FTRs, who thus receive reduced payments. Initial Order P.8, JA444.

Underfunding harms both FTR and ARR holders. FTR holders are harmed because the reduced payments require them to bear the very congestion costs they had attempted to offset. ARR holders (who again paid for the transmission system in the first place) are harmed because uncertainty over the value of an FTR reduces the price participants are willing to bid for an FTR at auction, reducing the value of FTRs in the auction and returning less revenue to ARR holders (*i.e.*, load). Initial Order P.97, JA472.

In 2012, PJM issued a comprehensive report identifying numerous complex interrelated factors contributing to revenue inadequacy. PJM Filing at 7-8, JA8-9, (citing PJM 2012 FTR Revenue Stakeholder Report ("PJM Revenue Report"), JA912). A key cause of underfunding has been the allocation of infeasible Stage 1A ARRs—that is, ARRs for which the existing transmission system is unlikely to produce congestion revenue. *See* PJM Filing at 7, JA8; Initial Order P.9, JA444. A second key cause of underfunding is that the costs of real-time imbalances that result in "balancing congestion"—congestion that was not anticipated in the day-ahead market, but that emerges in real time—were subtracted from the pool of revenues that fund FTRs. *See* PJM Revenue Report at 20-24, JA934-938; J. Aron & Co. Comments at 9-10, JA101-102. In its brief, FERC refers to this type of congestion as "real-time cost imbalances."

Contrary to the characterization in Petitioners' brief, real-time balancing congestion is fundamentally different from the day-ahead congestion that FTRs are intended to provide a hedge against. *See* Initial Order P.94, JA471. Day-ahead congestion is the result of predictable transmission constraints that require load in certain locations to be served by more expensive generation. Balancing congestion, by contrast, occurs in the real-time market from unexpected and unplanned events that cause deviations from the power flows modeled in the day-ahead market results. For example, when a tree falls on a transmission line, PJM may need to dispatch a different generator to serve load than it had expected to dispatch when it modeled the system in the day-ahead market. This redispatch results in additional costs. Prior to this proceeding, PJM had included the costs of balancing congestion in the same pool of money as the day-ahead congestion revenues used to fund FTRs. Initial Order PP.73-74, JA464-465. And, because balancing congestion is almost always negative (*i.e.*, PJM pays revenue to resolve unexpected events rather than collects it), including those costs in the same pool of money as day-ahead congestion revenues reduces the overall amount of money available to fund FTRs and compromises the intended purpose of FTRs as a hedge of day-ahead congestion. Negative balancing congestion accounted for 90 percent of the total amount of underfunding experienced in PJM between 2010 and 2014. *See* J. Aron & Co. Comments at 17 n.30 (*citing* PJM stakeholder presentation), JA109.

III. The Commission Initiated Proceedings to Comprehensively Remedy the Root Causes of FTR Underfunding.

Despite repeated attempts, PJM was unable to resolve the problem of FTR underfunding or address its root causes through a stakeholder process. Moreover, PJM's attempts to address FTR underfunding through means that would not require tariff changes (such as changes in modeling of Stage 1B ARRs) significantly reduced the availability of FTRs and caused cost shifts between FTR and ARR holders. *See* FERC Br. 12-14.

PJM therefore submitted a filing under Federal Power Act Section 206 in the instant proceeding asking the Commission to declare the existing tariff rules unjust and unreasonable. Recognizing the complexity and controversy of instituting broader reforms to address the root causes of FTR underfunding, PJM's filing made two targeted proposals to fix the tariff. *First*, PJM proposed to increase by 1.5% the load growth projections used in the 10-year Stage 1A simultaneous feasibility test. PJM Filing at 15-18, JA16-19. Doing this, PJM argued, would require it to plan and execute certain transmission upgrades sooner to ensure that the Stage 1A ARRs would be feasible. *Id.* at 15-18, JA16-19. *Second*, PJM proposed to eliminate the practice of "netting" positively valued FTRs against negatively valued FTRs within each participant's FTR portfolio before applying the *pro rata* reduction in congestion revenue payments that is required when underfunding occurs. *Id.* at 18-22, JA19-23.

In the Technical Conference Order, FERC determined that PJM's filing and the record developed in response raised material issues of fact regarding whether the existing ARR/FTR provisions in the PJM tariff were unjust and unreasonable, and whether PJM's proposed tariff revisions were just and reasonable. Accordingly, the Commission directed its staff to convene a technical conference to develop the record on various issues beyond the two targeted reforms proposed by PJM, including: "(i) ARR modeling and allocation processes; (ii) treatment of portfolio positions in allocating underfunding or surplus among FTR holders and the potential for market manipulation; and (iii) balancing congestion in ARR/FTR product design." Technical Conference Order P.48, JA302-303.

FERC concluded the chronic and pervasive problem of FTR underfunding rendered the current ARR/FTR market design unjust and unreasonable. Rather than accept PJM's proposed targeted reforms, the Commission instead adopted more comprehensive reforms to address two primary causes of FTR underfunding: (1) including balancing congestion costs with day-ahead congestion costs when settling FTRs; and (2) the requirement that PJM model and distribute infeasible ARRs/FTRs.

SUMMARY OF ARGUMENT

FERC conducted an extensive proceeding to identify the root causes of FTR underfunding, and developed a comprehensive and reasonable solution, consistent with its obligations under Federal Power Act section 206, 16 U.S.C. § 824e.

Extensive record evidence supports the Commission's conclusion that underfunding resulted from the inclusion of real-time balancing congestion in the pool of money used to pay FTR holders, and from the requirement that PJM model infeasible ARRs in Stage 1A of the ARR/FTR allocation process. The Commission's conclusion that balancing congestion should be removed from the settlement of FTRs and that ARRs should be modeled and distributed based on actual system conditions appropriately relied on this evidence. *See, e.g.*, *SecurityPoint Holdings, Inc. v. TSA*, 867 F.3d 180, 187 (D.C. Cir. 2017) (affirming agency action demonstrating a "rational connection between the facts found and the choice made" (quotation marks omitted)). Similarly, FERC appropriately relied on voluminous expert evidence demonstrating that PJM's "portfolio netting" rule (described in detail below) did not contribute to FTR underfunding, and was required to ensure a just and reasonable FTR market design. *Id.*

Petitioners' arguments to the contrary all rely on the mistaken premise that the "Congestion Revenue" included in the design of FTRs must include balancing congestion, and that it was arbitrary and capricious for FERC to distinguish between day-ahead congestion and balancing congestion. But, as FERC reasonably explained based on the record and recent events in the PJM market, day-ahead congestion and balancing congestion result from different causes and impact different entities. Balancing congestion represents the costs incurred by PJM in real-

time to maintain reliability in the face of unpredictable events, and the incurrence of those costs provides system-wide benefits. Assigning the costs of balancing congestion to FTR holders alone, who neither cause nor alone benefit from the incurrence of those costs, unfairly undercuts the utility of FTRs as a hedge. Accordingly, FERC reasonably concluded that balancing congestion should not be included within the design of FTRs. That conclusion, as well as FERC's other conclusions concerning netting and the use of more up-to-date data in modeling generator resource to load paths to ensure ARR/FTR feasibility, were reasonable and supported by the evidence, and should be upheld. *Alcoa, Inc. v. FERC*, 564 F.3d 1342, 1347 (D.C. Cir. 2009) ("We affirm the Commission's orders so long as FERC examined the relevant data and articulated a … rational connection between the facts found and the choice made." (internal quotation marks and brackets omitted)).

ARGUMENT

I. FERC Reasonably Concluded, Based on Extensive Record Evidence, that Including Real-Time Balancing Congestion in the Settlement of FTRs Was Unjust and Unreasonable.

Based on the record, the Commission identified a "pervasive problem associated with including balancing congestion in the definition of FTRs." Initial Order P.93, JA471. Doing so resulted in "either chronic under-funding or the unrealized value of ARRs for certain [load-serving entities]." *Id.* FERC's rationale was straightforward: "The value of an FTR is determined by *day-ahead* energy

market prices that reflect *day-ahead* congestion costs," and thus the FTR serves "as a hedge against day-ahead congestion." *Id.* at P.94, JA471 (emphasis added). By contrast, balancing congestion "whether positive or negative, is a settlement based on costs incurred in the *real-time* market." *Id.* (emphasis added). Thus, removing real-time balancing congestion costs from the definition of FTRs, the Commission found, would increase the efficacy of FTRs as a hedge against day-ahead congestion costs. *Id.*

The Commission also found that unlike for day-ahead congestion costs, "FTR holders are not the sole beneficiaries of balancing congestion", nor are they the cause of the myriad reasons that real-time transmission capacity can be less than what was predicted in the day-ahead market. *Id.* at P.95, JA472. FERC thus found that the allocation of balancing congestion costs solely to FTR holders was unjust and unreasonable and "not consistent with cost causation principles." *Id.* To the contrary, because "PJM market participants, the PJM market operator, outside systems, and other external influences can introduce deviations to effectively increase or decrease balancing congestion," *id.* at P.98, JA472, cost causation principles required PJM to allocate the costs of balancing congestion "on a pro-rata basis to real-time load and exports." *Id.* at P.99, JA473.

The Commission also found that removing balancing congestion from the definition of FTRs would not harm load-serving entities. As the Commission

explained, to the extent PJM has sought to mitigate the underfunding of FTRs by allocating fewer ARRs (and thus reducing the number of FTRs), load-serving entities and their customers receive less in compensation for paying the fixed cost of the transmission grid. *Id.* at P.97, JA472. Moreover, the underfunding of FTRs that results from allocating real-time balancing congestion to FTR holders leads to lower FTR auction prices, and thus lower values for ARRs. *Id.*

A. The Commission Appropriately Rejected Petitioners' Conflation of Day-Ahead Congestion and Real-Time Balancing Congestion.

Petitioners' objections to FERC's conclusion depend upon conflating day-ahead congestion with real-time balancing congestion, even though the two types of congestion have different sources and different consequences. Having conflated the two types of congestion, Petitioners then assert "[a] key rationale for including Financial Participants in FTR Auctions is to provide load-serving entities an opportunity to exchange uncertain payments based on future Congestion for fixed payments." Pet. Br. 54.

But, contrary to Petitioners' assertions, FTRs have long been recognized as a day-ahead product. *See, e.g., PPL EnergyPlus, LLC v. PJM Interconnection, L.L.C.*, 134 FERC ¶ 61,263 at P.2 (2011) ("An FTR is a financial instrument that entitles its holder to receive compensation for Transmission Congestion Charges that arise when the transmission grid is congested in the Day-ahead Market and differences in Day-ahead congestion prices result from the dispatch of generators out of merit order

to relieve the congestion."). Based on this long-standing recognition, the Commission reasonably explained the purpose of FTRs is *not* "to provide a hedge against 'total congestion' which commenters argue is comprised of day-ahead and real-time balancing congestion." *PJM Interconnection, L.L.C.*, 158 FERC ¶ 61,093 at P.79 (2017), JA888 ("Reh'g Order"). Rather, FTRs are a day-ahead product only and (when fully funded) they return to their holders the congestion costs collected through the day-ahead market over specific transmission paths. Balancing congestion, by contrast, "is a settlement based on costs incurred in the real-time market." *Id.* at P.54, JA880. Indeed, as the Commission explained, the use of the term "balancing *congestion*" is a misnomer, as it does not represent congestion on the transmission grid but rather "an imbalance in real-time compensation." *Id.* at P.79, JA888 (emphasis added). That is, unlike day-ahead congestion that is modeled by PJM and market participants, "balancing congestion" is unexpected and requires real-time redispatch that deviates from the day-ahead forecast.[4] Petitioners fail to grapple with the Commission's rationale, but instead merely assert, without support, that all congestion is the same. *See, e.g.*, Pet. Br. 16 (definition of "Congestion"); *id.* at 39 ("Congestion Revenue given to FTR holders should be equal to Congestion, and Load should not be required to pay negative Balancing Congestion.").

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[4] As noted above, a tree falling on a transmission line is an example of an event that would require real-time real dispatch and thus incur balancing congestion costs. *See supra* at 8.

Petitioners' conflation of day-ahead congestion and real-time balancing congestion also allows them to mischaracterize the future congestion payments load-serving entities avoid by selling their FTR entitlement to another market participant (such as a financial participant). As explained earlier, PJM allocates ARRs/FTRs based on a model that incorporates the normal operating characteristics of the transmission system including planned transmission outages, available generators, and certain historical data. *Supra* at 4-5. Based on these expected conditions, market participants can reasonably estimate when more expensive sources of energy will be needed, and thus when day-ahead congestion charges will be incurred. FTR holders can therefore be expected to factor day-ahead congestion costs into the bids they make in the FTR auction. And, when an entity obtains an FTR, it takes on the risk that its estimate of day-ahead congestion will be wrong. In contrast, balancing congestion by definition constitutes *unexpected* costs that arise in the real-time energy market (due to unanticipated transmission and generator outages, or load conditions, for example), which require generators to be redispatched in a manner that cannot be predicted.

Accordingly, the Commission reasonably explained "[t]he multi-faceted nature of balancing congestion does not easily permit a granular allocation to those parties causing and directly benefiting from balancing congestion," Initial Order P.98, JA473, and for much the same reason FTR holders "cannot predict the level of

balancing congestion," *id.* at P.95, JA880. Thus, Petitioners are wrong when they assert that FTR holders "are free to discount their bids in FTR Auctions in order to reflect their expectations of Congestion, including Balancing Congestion." Pet. Br. 54. As the Commission found based on evidence, by its nature, balancing congestion cannot be readily predicted.

For much the same reason, Petitioners err in claiming that FTR underfunding is a "misnomer and logical impossibility." *Id.* at 56-58. Certainly, if FTR compensation were defined as Petitioners assert, then there would not be any underfunding. But, as the Commission has explained, FTRs are intended to return to their holders the day-ahead congestion costs incurred over specified transmission paths. The reason for this, as described above, is that FTRs were intended to allow firm transmission customers to mirror (to the extent possible) the physical transmission service that existed prior to the creation of the organized electricity market with a financial product that would allow a market participant to receive the functional equivalent of firm price service. *See* Protest of Elliott Bay, Aff. of Susan Pope at 6, JA351. But, firm transmission customers could never avoid unexpected real-time events that necessitated re-dispatch, and FTRs were not intended as a hedge for these distinct costs. FTRs also settle at day-ahead prices. Thus, when negative balancing congestion costs are included, thereby reducing the pool of revenue to be redistributed to FTR holders, FTRs are underfunded and their ability

to provide a hedge against day-ahead congestion costs is impaired. *See* Comments of J. Aron & Co. at 17 n.30 (showing extent of underfunding), JA109. The Commission's decision appropriately addresses this problem.

B. Removing Balancing Congestion from the Definition of FTRs Does Not Improperly Shift Costs to Load.

Petitioners argue repeatedly that removing balancing congestion from the definition of FTRs forces load-serving entities and their customers to subsidize FTR holders (including financial participants) in the FTR market, *see, e.g.*, Pet. Br. 55, and that the allocation of balancing congestion costs to load and exports is inconsistent with cost causation principles, *see id.* at 59-62. Petitioners are wrong on both counts.

First, the Commission appropriately recognized it was not only FTR holders who were disadvantaged by the previous allocation. Under the previous system, PJM's attempts to mitigate balancing congestion resulted in a devaluation and reduced allocation of ARRs. Initial Order P.97, JA472. Given that ARRs are meant to compensate load for its role in developing the transmission system, any reduction in the amount and value of ARRs—as FERC explained occurred due to the inclusion of balancing congestion in the definition of FTRs—left load "economically worse off." *Id.* Petitioners entirely fail to address this critical finding by the Commission.

Second, the fact that the Commission's decision may result in load bearing balancing congestion costs previously borne by FTR holders does not mean that load

is being unfairly disadvantaged or discriminated against. To the contrary, as the Commission recognized, the guiding principle when allocating costs amongst entities is cost *causation*, and it found based on the evidence before it that "FTR holders do not cause ... balancing congestion." Initial Order P.95, JA472; *see, e.g.*, *S.C. Pub. Serv. Auth. v. FERC*, 762 F.3d 41, 53 (D.C. Cir. 2014) ("The cost of transmission facilities must be allocated to those within the transmission planning region that benefit from those facilities in a manner that is at least roughly commensurate with estimated benefits." (quotation marks omitted)).

FTR holders do not "alone benefit from the payment of balancing congestion"—the payment of such costs has system-wide benefits. Initial Order P.95, JA472. Accordingly, the Commission reasonably held that assigning balancing congestion costs to FTR holders, when the benefits of redispatch in response to unexpected events in real-time extend well beyond them, was unjust and unreasonable. Given their broad system-wide benefits, broadly allocating those costs to load on a pro rata basis is just, reasonable, and consistent with Commission and court precedent. *See* FERC Br. 32 (citing cases).

C. The Commission Reasonably Explained Why the Record and Circumstances Here Differ From the *FirstEnergy* Cases.

Petitioners argue the Commission deviated from prior precedent, namely the *First Energy I* and *First Energy II* decisions, without reasoned explanation when it decided to remove balancing congestion from FTR settlements. Pet. Br. 47-59. To

be sure, when an agency changes course, "a reasoned explanation is needed for disregarding facts and circumstances that underlay or were engendered by the prior policy." *FCC v. Fox Television Stations*, Inc., 556 U.S. 502, 516 (2009); *see, e.g.*, *La. Pub. Serv. Comm'n v. FERC*, 772 F.3d 1297, 1303 (D.C. Cir. 2014) ("The Commission can depart from a prior policy or line of precedent, but it must acknowledge that it is doing so and provide a reasoned explanation."). Here, even if Petitioners are correct that the Commission has changed course, the Commission provided a reasoned explanation for removing balancing congestion from the definition of FTRs, as discussed above.

As an initial matter, Petitioners mischaracterize the *FirstEnergy* cases. In *FirstEnergy I*, the Commission did *not* rule that balancing congestion should be part of the FTR compensation scheme. Rather, the Commission dismissed the complaint without prejudice, concluding it lacked sufficient information about the root cause of FTR underfunding for it to rule one way or the other. *See, e.g., FirstEnergy Solutions Corp. v. PJM Interconnection, L.L.C.*, 138 FERC ¶ 61,158 at P.46 (*FirstEnergy I*) ("Without a record determining the root cause of the transmission congestion, we find that the present record is insufficient for us to resolve the issue."), *order on reh'g*, 140 FERC ¶ 61,051 (2012) (*FirstEnergy I* Rehearing Order). Moreover the Commission noted that PJM and its stakeholders were in the midst of an analysis to determine the "complex factors" causing underfunding, and

that the process would result in a report published by May 1, 2012. *Id.* at PP.45-46. Given the ongoing PJM stakeholder process and analysis, the Commission determined it would not be an efficient use of its resources to "circumvent" that process. *Id.* at PP.46-47.

In *FirstEnergy II*, the Commission did not evaluate particular means of reducing underfunding, but rather addressed a predicate issue: whether the existence of FTR underfunding, alone, demonstrated the PJM tariff was unjust and unreasonable. *See FirstEnergy Solutions Corp. v. PJM Interconnection, L.L.C.*, 143 FERC ¶ 61,209 at P.41 (2013) (*FirstEnergy II*), *reh'g denied*, 151 FERC ¶ 61,205 (2015) (*FirstEnergy II* Rehearing Order). The Commission found the record as developed in *FirstEnergy II* was insufficient on this point. Specifically, the Commission "recognized that full funding of FTRs is a goal, but the PJM Tariff does not ensure full funding." *First Energy II*, 143 FERC ¶ 61,209 P.41; *FirstEnergy II Rehearing Order*, 151 FERC ¶ 61,205, P.23 ("[N]either PJM's Tariff nor Commission policy guarantees that FTRs will be fully funded."). In addition, the Commission found the complainant had not identified who was causing the negative balancing congestion leading to FTR underfunding, why FTR holders could not factor the risk of underfunding into the prices they offered in the auctions, nor how the proposed replacement allocation of balancing congestion would be less arbitrary than the existing method. Finally, as it did in *FirstEnergy I*, the Commission again

deferred to the PJM stakeholder process to continue to pursue solutions to the fundamental causes of underfunding identified in the stakeholder process, the PJM Revenue Report, and PJM's answer in that proceeding. *See, e.g.*, *FirstEnergy II Rehearing* Order, 151 FERC ¶ 61,205 P.26; *see also* Answer of PJM Interconnection, L.L.C. at 4-5, Docket No. EL13-47-000 (June 2, 2016) (noting additional work at PJM to address underfunding and emphasizing that FERC's order there does not "simply clos[e] the matter for either PJM or its stakeholders").

As a threshold matter, then, in both *FirstEnergy* cases FERC and PJM put the market on notice that the effect of balancing congestion on FTR underfunding was still under review by PJM stakeholders and not a settled issue, and that additional proposals were likely forthcoming. *See FirstEnergy II Rehearing Order*, 151 FERC ¶ 61,205, P.26 (noting that resolution of the real-time balancing congestion issue "may require separate and/or additional proceedings").

Nonetheless, in deciding now to approve the removal of balancing congestion from the settlement process for FTRs, the Commission appropriately relied on various changed circumstances since *FirstEnergy I* and *FirstEnergy II,* and a broader regulatory record elucidating the various root causes of FTR underfunding. *See, e.g.*, *Midwest Indep. Transmission Sys. Operator, Inc. v. FERC*, 388 F.3d 903, 911 (D.C. Cir. 2004) ("[W]e must defer to an agency's reasoned view of whether circumstances have changed sufficiently to justify a regulatory change."). For one,

unlike the uncertainty FERC noted in *FirstEnergy I* as to the causes of FTR underfunding, in this proceeding FERC had substantial evidence before it demonstrating that balancing congestion was a major cause of FTR underfunding. *See* Reh'g Order P.75, JA887 ("The record in this proceeding clearly demonstrates that the inclusion of balancing congestion in the definition of FTRs results either in chronic revenue inadequacy of FTRs, or the unrealized value of ARRs for certain load serving entities."); *see also* PJM Revenue Report, JA912; J. Aron & Co. Comments at 10 (citing PJM data), JA102.

In addition, unlike the deficiency in the *First Energy II* record, the record here demonstrated that FTR holders are not the sole cause of balancing congestion, nor can they accurately predict the level of balancing congestion which leads to the discounting of FTR bids at auction. *See* Initial Order P.95, JA472 ("Although balancing congestion is currently allocated to FTR holders, FTR holders do not cause and cannot predict the level of balancing congestion."). Therefore, the Commission found here—which it was unable to do on the records created in *First Energy I* and *First Energy II*—that "the current allocation of balancing congestion to FTR holders is not consistent with cost causation principles." *Id.* Finally, the Commission found that events since the *First Energy* cases, and most specifically PJM's attempt to reduce underfunding by reducing the allocation of certain ARRs,

devalued ARRs and FTRs and thereby harmed the very transmission customers that paid for the fixed costs of the system.

In sum, the critical differences between the records in *First Energy* cases and the record here, and the new evidence before the Commission concerning the causes of FTR underfunding and the impact of alternative means of reducing underfunding, justified any change in approach the Commission may have taken. *See, e.g.*, *Mingo Logan Coal Co. v. EPA*, 829 F.3d 710, 713 (D.C. Cir. 2016) (approving EPA's withdrawal of mining permits in light of changed circumstances).

D. Petitioners Misstate the Role of Financial Participants in the FTR Market.

At various points Petitioners suggest the sole intended recipient of FTRs are load-serving entities that use historic transmission pathways, and that the participation of what they term "Financial Participants" in the FTR marketplace serves a purpose at odds with load. *See, e.g.* Pet. Br. 55, 62.

Again, Petitioners misrepresent the facts. FTRs are used by a number of entities other than traditional load-serving entities, including several of the Intervenors joining this brief. Far from being mere speculators, these participants—including so-called "Financial Participants"—play a valuable role in creating a liquid market for products that can provide price certainty for the delivery of energy. They facilitate greater price transparency and price discovery, increase opportunities for entities to acquire FTRs, and help reveal persistent areas of congestion on the

grid that require upgrades.[5] Further, greater participation in the FTR market leads to more efficient FTR prices, which results in payments to ARR holders that better reflect the value of their transmission rights. Moreover, many load-serving entities rely on financial participants (including Intervenors here) as counterparties in hedging transactions that are facilitated by Financial Participants' ability to transact in the FTR market.

Petitioners' contention that the Commission has discriminated between FTRs held by financial participants and FTRs held by load (because the latter would have to pay the costs of balancing congestion while the former do not) also fails. Pet. Br. 62. FTRs provide a hedge against one specific cost, day-ahead congestion, and in that respect the value of an FTR is identical regardless of the entity that holds it. The fact that load may have to bear additional, distinct, costs (including balancing congestion) incurred for their benefit does not amount to undue discrimination.

E. Removing Balancing Congestion from the Settlement of FTRs Satisfies the Commission's Obligations Under the Federal Power Act and Does Not Change FTR's Jurisdictional Status.

[5] *See, e.g. Long-Term Firm Transmission Rights in Organized Electricity Markets*, 116 FERC ¶ 61,077 at P.385 (2006) ("The Commission believes that all long-term firm transmission rights should be tradable. Allowing tradability provides the load serving entity with flexibility to manage its transmission rights portfolio and helps to ensure that long-term firm transmission rights go to the market participants that value them most highly.").

Finally, Petitioners' assert that the Commission's orders contravene the "statutory definition of an FTR" in Federal Power Act Section 217(b) as "an instrument to facilitate the delivery of energy" by redefining FTRs as purely Day-Ahead instruments. Pet. Br. 67-68, 70. But the Commission fully addressed assertions that removing balancing congestion from FTRs violates § 217(b)(4). *See* Reh'g Order P.81, JA889-890. Specifically, the Commission found removing balancing congestion improved the value of FTRs as a hedge and fulfilled the statutory mandate to "enable load serving entities to secure firm transmission rights (or equivalent tradable or financial rights) on a long-term basis." *Id.* Moreover, as FERC notes in its brief, PJM's ARR allocation process already gives load the priority they assert is required by Section 217(b)(4). FERC Br. 36-37.

Likewise, Petitioners claim that removing balancing congestion from FTRs renders FTRs "no longer inextricably tied to physical energy delivery," and thus places them outside the exemption provided by the Commodities Futures Trading Commission ("CFTC") and within that agency's exclusive jurisdiction. Pet. Br. 73. Again, Petitioners entirely ignore the Commission's detailed response to this exact allegation. *See* Reh'g Order P.82, JA890. As the Commission noted, the CFTC identified three attributes of FTRs that placed them under the Commission's jurisdiction: that the volume of FTRs is limited by the capability of the transmission system; that FTRs are auctioned by RTOs and ISOs to market participants; and that

the transaction of FTRs does not require the physical delivery of energy. *Id.* Removing balancing congestion from the definition of FTRs does not alter this analysis, and the CFTC has not asserted jurisdiction over FTRs in all other RTOs and ISOs, none of which include balancing congestion in their definition of FTRs. *Id.*

II. The Commission Reasonably Found that Portfolio Netting Is Just and Reasonable and Does Not Contribute to Underfunding.[6]

The Commission rejected PJM's proposal to eliminate a rule in which it "nets" the positive values for "prevailing flow" FTRs (*i.e.*, FTRs where the sink price is higher than the source price) against negative values for "counterflow" FTRs (*i.e.*, FTRs where the sink price is lower than the source price) before applying a discount ("Payout Ratio"[7]) to the net value of a participant's portfolio of FTRs. The Commission concluded that netting is "a just, reasonable, and desirable feature in FTR markets," Initial Order P.71, JA464, which ensures equal treatment for both prevailing flow and counteflow FTRs when there is underfunding.[8]

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[6] Only the following Intervenors join in Part II of this brief: Appian Way Energy Partners; Boston Energy Trading and Marketing, LLC; DC Energy, LLC; Elliott Bay Energy Trading, LLC; NRG Power Marketing, LLC; and Vitol Inc.

[7] The payout ratio is the ratio of total FTR payments owed to total funds available to pay FTR holders.

[8] To the extent an FTR portfolio settles with a net negative target allocation, the Payout Ratio does not apply. Few FTRs are held in net negative portfolios and no party with a net negative portfolio raised this concern. *PJM Interconnection, L.L.C.*,

The Commission determined that: (a) rational market design requires symmetrical values for corresponding prevailing flow and counterflow FTRs, and that netting is the mechanism through which that symmetry is achieved (*see* Initial Order P.69 & n.62, JA463; (b) eliminating netting would not improve FTR funding, but rather would simply reallocate available FTR funding amongst existing market participants (*Id.*, P.68, JA463; *PJM Interconnection, L.L.C.*, FERC Dkt. No. ER16-121-000 et al., Elliott Bay Answer at ("Elliott Bay Answer") at 10-16 (Dec. 8, 2015), JA247-253 (providing examples demonstrating how the reallocation of funds would occur if netting were eliminated); and (c) portfolio netting does not result in a subsidy or windfall for counterflow FTR holders (Initial Order P.69, JA463; Reh'g Order P.46, JA877); *see also PJM Interconnection, L.L.C.*, FERC Dkt. No. ER16-121-000 et al., Elliott Bay Post-Technical Conference Comments at 10-12 (Mar. 15, 2016), JA328-330 ("Elliott Bay Post-Technical Conference Comments").

The Commission's conclusions regarding netting were well-reasoned and based on substantial record evidence, including Technical Conference testimony, extensive numeric examples, and affidavits and exhibits of five different PhDs with

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Dkt. No. ER16-121-000 et al., Motion to Intervene and Protest of Elliott Bay Energy Trading, LLC (Nov. 9, 2015), Affidavit of Dr. Brian Lonergan at P.18, JA217 ("Lonergan Aff."). FERC correctly ruled that this limited issue did not have bearing on its netting decision. Reh'g Order P.49, JA878-879. Accordingly, references to portfolios in this section refers to portfolios with net positive target allocations.

expertise in ISO/RTO energy markets, all of whom identified netting as an essential part of FTR market design. *See, e.g.*, *PJM Interconnection, L.L.C.*, FERC Dkt. No. ER16-121-000 et al., Transcript of Technical Conference (Feb. 4, 2016) ("Technical Conference Transcript") at 227:7-15, JA315 (Dr. Patton); *Id.* 138:3-139:14, JA307-308 (Dr. Pope); *Id.* 143:19-146:8, JA310-313, (Dr. Shanker); Lonergan Aff., JA211; *PJM Interconnection, L.L.C.*, FERC Dkt. No. ER16-121-000 et al., Protest of DC Energy, LLC, Attachment A, Affidavit of Dr. Andrew J. Stevens at P.31 (Nov. 9, 2015), JA176.

Petitioners rely on the erroneous allegation that netting of prevailing flow and counterflow FTRs in participant portfolios before the application of the Payout Ratio results in load providing a subsidy to financial marketers. Petitioners assert that counterflow FTR holders must assume the obligation "to make a future payment in the full amount of actual counterflow congestion." Pet. Br. 77. This is the foundation for Petitioners' faulty conclusion that "[n]etting requires [load-serving entities] holding positive FTRs to subsidize these speculators [any party with counterflow FTRs, including load-serving entities]…". *Id.*

Petitioners' arguments are misguided because they ignore that FERC explicitly approved netting in 2007 so as to settle prevailing flow and counterflow FTRs in a non-discriminatory manner. *PJM Interconnection, LLC*, 121 FERC ¶ 61,073 P.16 (2007); Initial Order P.71, JA464. Netting is an intentional part of the

PJM FTR market design. 121 FERC ¶ 61,073, P.16; *PJM Interconnection, L.L.C.*, Docket No. ER16-121-000 et al., Motion to Intervene and Protest of Elliott Bay Trading, LLC, 8-10 (Nov. 9, 2015), JA190-192. Moreover, netting provides the functional equivalent of applying the Payout Ratio directly to counterflow FTRs. Initial Order P.69, JA463; Reh'g Order P.45, JA876-877.

The need for netting, and the complete absence of any subsidies resulting from netting, is depicted in the following example in the record. *See* Elliott Bay Post-Technical Conf. Comments at 8-9, JA326-327.

1. Assume a market participant ("Buyer") wants to purchase a prevailing flow FTR from location A to location B as a hedge, but there are no FTRs available because they have been allocated or sold by PJM;

2. If another market participant ("Seller") is willing, for a price, to fund the congestion cost between location A and location B by taking a counterflow FTR from location B to location A, then it is possible for PJM to award an additional prevailing flow FTR from location A to location B to the Buyer.

3. This transaction will be viable only if the Buyer is willing to pay a price for the prevailing flow FTR from location A to location B that is equal to or greater than the price the Seller bids to assume the congestion payment obligation it takes on by purchasing a counterflow FTR from location B to location A.

To help illustrate this transaction further:

- Assume a 1 MW prevailing flow FTR from A to B has a congestion value (i.e. "Target Allocation") of $5.00.
- Assume a 70% Payout Ratio.
- The payout for the FTR from A to B would be $3.50 ($5.00 x 70% = $3.50).
- Assume the purchase of the prevailing flow FTR from A to B was made possible by a counterflow FTR from B to A, and the PJM auction clearing

price was $3.50 for the prevailing flow FTR and -$3.50 for the counterflow FTR.

- The $5.00 Target Allocation for the FTR from A to B was made possible by the counterflow FTR (from B to A) with a -$5.00 Target Allocation.
- With netting, PJM adds the -$5.00 to the counterflow FTR holder's positive Target Allocations before applying the Payout Ratio. Accordingly, the settlement result is mathematically equivalent to applying the Payout Ratio of 70% to the negative Target Allocation so the payout on the counterflow FTR is -$3.50 (-$5.00 x 70%= -$3.50).

As this example shows, the purchase prices of the FTRs net to zero (a $3.50 payment for the FTR from A to B plus a -$3.50 payment for the FTR from B to A), which leaves auction revenues unchanged. The payouts of the FTRs net to zero ($3.50 for the FTR from A to B and -$3.50 for the FTR from B to A), which leaves net Target Allocations and overall FTR funding unchanged. Netting counterflow and prevailing flow FTRs thus does not contribute to FTR underfunding and does not result in subsidies by prevailing flow FTR holders for the benefit of counterflow FTR holders. The Commission was well-supported in concluding: "[w]e agree with Financial Marketers' and Elliott Bay's experts that portfolio netting does not result in a cross-subsidization of counterflow FTRs, as the current practice already guarantees that both positive and negative target allocations [prevailing flow and counterflow FTRs] are treated in the same manner. *Netting is the functional equivalent of applying the same payout ratio to both prevailing flow and counterflow FTR target allocations*…" Initial Order P.69, JA463 (emphasis added) (footnote omitted); *see also* Reh'g Order P.45, JA876-877; Technical Conference Transcript

227:7-15, JA315 (Dr. Patton comments); *id*. at 138:3-139:14, JA307-308 (Dr. Pope comments); *id*. at 143:19-146:8, JA310-313 (Dr. Shanker comments).

Petitioners fail to recognize that FTR auction prices reflect expectations of underfunding and advocate for an irrational market design. Initial Order P.69, JA463; Reh'g Order P.46, JA877. With netting in place, the payouts realized by the Buyer and Seller in the example above would be $3.50/-$3.50. The Buyer and Seller would thus likely be willing to transact for the FTRs at or near $3.50/-$3.50 (a price that takes into account the impact of the Payout Ratio on Target Allocations). If netting were eliminated, the prevailing flow FTR would payout $3.50 and the counterflow FTR would require a payment to PJM of $5.00. Without netting, the Buyer and Seller are unlikely to find a price where they would transact because the payouts on the corresponding FTRs are not symmetrical. Rational market design requires that corresponding prevailing flow and counterflow FTRs settle with equal and opposite (i.e. +$3.50 and -$3.50) values. *See* Elliott Bay Post-Technical Conference Comments at 9-10, JA327-328; *see also* Initial Order P.69 n.62, JA463. The elimination of netting would result in settlements for corresponding prevailing flow and counterflow FTRs that were no longer equal and opposite and would thus result in a dysfunctional market design. *See* Lonergan Aff. P.40-44, JA222-223; *see also* Elliott Bay, Post-Technical Conference Comments, Pope Affidavit at 19, JA364; testimony of Dr. David Patton, Technical Conference Transcript at 227:7-

12, JA315 (“[Proposing to eliminate netting] increases the discrimination between two identical products … You sell them [at] the same price in the FTR market and then you want to [settle] them in the day-ahead [at] the two different prices, that’s just fundamentally flawed.”).

Petitioners also argue that netting violates Federal Power Act Section 217 because it “results in degradation of the load-serving entities’ statutory priority to firm transmission service by arbitrarily requiring load-serving entities to subsidize the speculative activities of financial entities that take positions in counterflow (*i.e.* negative) FTRs.” Pet. Br. 76. But as the Commission found: “[t]his argument relies on the erroneous allegation that [netting] maintains subsidies by load in favor of financial marketers when there is a symmetrical application of the payout ratio to both prevailing flow and counterflow FTRs in net positive portfolios. As explained [in Reh’g Order P.46], there is no subsidy.” Reh’g Order P.47, JA877.

Moreover, the Commission correctly found that Petitioners’ reliance on Section 217 “read[s] too much” into that statutory language. *Id.* Section 217(b)(4) directs the Commission to “enable[] load-serving entities to secure firm transmission rights (or equivalent tradable or financial rights) on a long-term basis for long-term power supply arrangements made, or planned, to meet such needs.” 16 U.S.C. § 824q(b)(4). It does not, as Petitioners claim, “guarantee[] discriminatory treatment for prevailing flow FTRs over counterflow FTRs.” Reh’g Order P.47, JA877.

Finally, Petitioners state that load-serving entities must have "priority over non-load serving entities in the allocation of long-term firm transmission rights that are supported by existing transmission capacity." Pet. Br. 75 (quoting *Long-Term Firm Transmission Rights in Organized Electricity Markets*, 116 FERC ¶ 61,077, P.325). PJM's existing FERC-approved market rules already comply with this requirement by providing load-serving entities with priority in securing ARRs and FTRs; accordingly, the requirements of Federal Power Act section 217 are fully satisfied.[9] Using portfolio netting to ensure that all FTRs are treated in a non-discriminatory manner when paying out congestion revenues does not diminish this allocation priority.

In sum, Petitioners' objections to netting are premised on a fundamental flaw—that netting effects a subsidy to counterflow FTR holders. The Commission's well-reasoned holding that netting does not result in any subsidies is fully supported by the record below, and Petitioners fail to cite to any legal or statutory precedent that would justify upsetting the Commission's expert judgment. *See FERC v. Elec. Power Supply Ass'n*, 136 S. Ct. 760, 782 (2016) (holding that the court must uphold

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[9] When the Commission approved PJM's portfolio netting rules in 2007, it simultaneously held PJM rules regarding transmission rights allocations satisfied Federal Power Act section 217 (load-serving entities receive sufficient priority). *See PJM Interconnection, L.L.C.*, 119 FERC ¶ 61,144 at P.91 (2007); *see also* Reh'g Order P.81, JA889-890.

agency action that examines relevant considerations and articulates "a rational connection between the facts found and the choice made").

III. The Commission Reasonably Required ARRs To Be Allocated Based on Actual System Conditions.

Finally, FERC's orders were eminently reasonable in requiring that PJM allocate ARRs based on actual system conditions, as opposed to a historical model that included no longer existing generation sources. FERC reasonably concluded, based on the record, that the previous use of that historical model "present[ed] a disconnect between the Stage 1A ARR allocation and the actual system usage," resulting in "infeasible Stage 1A ARRs … [and] an unjust and unreasonable cost shift" between ARR/FTR holders. Initial Order P.40, JA454.

Petitioners agree with FERC's finding under Federal Power Act Section 206 that "the use of historic paths" in the annual ARR allocation "leads to an unjust and unreasonable result," Pet. Br. 78, but differ with FERC on the remedy. Petitioners contend that FERC's directive to update the ARR allocation model to "reflect actual system usage" is arbitrary and capricious, *id.*, and that FERC should have instead adopted the 1.5% adder to the annual load growth forecast that PJM initially suggested, *id.* at 79-82.

"When reviewing FERC's selection of a remedy, [this court] give[s] the Commission great deference," *Sacramento Municipal Utility District v. FERC*, 616 F.3d 520, 541 (D.C. Cir. 2010) (internal quotation marks omitted) ("*SMUD*"), and

"will set aside FERC's remedial decision only if it constitutes an abuse of discretion." *La. Pub. Serv. Comm'n v. FERC*, 174 F.3d 218, 225 (D.C. Cir. 1999). FERC reasonably found that updating the allocation model to take account of actual system usage would remedy the unjust and unreasonable cost shifts between ARR holders and FTR holders caused by the "disconnect" between historic-based ARR allocation and actual system usage. *See* Initial Order PP.40-45, JA453-455; Reh'g Order PP.24-25, JA869-870. That conclusion is reasonable on its face, and should be upheld.

First, Petitioners mount little challenge to FERC's adopted remedy. They claim only—in a single paragraph—that FERC's remedy lacks record support and will "likely result" in fewer ARRs allocated. Pet. Br. 80. Petitioners instead devote far more of their argument to why FERC should have adopted *their* preferred remedy, *i.e.*, increasing the load estimate for the next FTR auction by 1.5% above the level PJM would otherwise estimate. *Id*. 78-82. But whatever merit they see in their alternative, Petitioners have failed to sustain their burden of showing why FERC failed to support *its* replacement tariff provisions as just and reasonable. *See FirstEnergy Serv. Co. v. FERC*, 758 F.3d 346, 353 (D.C. Cir. 2014).

Second, FERC considered the merits of Petitioners' preferred solution and rejected it as not just and reasonable. As FERC found, such a fix could trigger unnecessary transmission enhancements (for which load would have to pay) and

"ignores the more fundamental issue of why PJM should continue to model requested ARRs based on historic generation paths that load no longer utilizes." Initial Order P.42, JA454-455. Petitioners never get past this basic shortcoming.

Regarding FERC's adopted solution, Petitioners offer no convincing arguments as to why it is not just and reasonable. For example, Petitioners provide no record support or explanation for how allocating ARRs based on paths loads actually use will *decrease* the ARRs that are properly considered feasible for those loads. Pet. Br. 80. By contrast, FERC explained the historic path tariff requirement creates a "disconnect" between ARR allocation and system usage resulting in some paths appearing infeasible in the model when in fact these lines can support additional ARRs. Initial Order P.40, JA456-454. As FERC explained, the historic path method requires PJM to use historical generation sources dating as far back as 1998 regardless of whether such generators even exist today. *See id.* at P.21 & n.15, JA448 (identifying historical reference years). FERC reasonably concluded that such reliance on historic paths "contribut[es] to infeasible" ARRs and has "resulted in an unjust and unreasonable cost shift." *Id.* at P.40, JA453.[10]

[10] Petitioners' claim that FERC's remedy is "inconsistent with [Federal Power Act] 217," Pet. Br. 80, can be quickly dismissed, as Section 217 specifically "recognizes that rights do not have to be awarded to undeliverable paths." Reh'g Order P.25, JA870 (citing Section § 217).

Moreover, the record supports FERC. As PJM explained below, transmission flows and congestion patterns change when generation plants retire, as energy is no longer injected from that plant into the transmission system, resulting in "an inconsistent set of allocated ARRs, and potentially corresponding FTRs, that do not necessarily align with [transmission system] usage." *PJM Interconnection, L.L.C.*, FERC Dkt. No. ER16-121-000 et al., Initial Post-Technical Conference Comments of PJM Interconnection, L.L.C. (Feb. 4, 2016) at 6, JA398. Thus, FERC reasonably determined that reflecting actual power flows and congestion patterns would reduce ARR infeasibilities in the annual allocation. Reh'g Order P.24, JA869. Moreover, FERC concluded "[a]ligning ARR paths with the system … aligns the 10-year simultaneous feasibility analysis that can trigger transmission upgrades" that can resolve such infeasibilities on a going forward basis. *Id.* P.25, JA870.

In effect, Petitioners ask the court to reject FERC's policy determination that rectifying an error in the allocation model is more desirable than merely treating symptoms resulting from such error. FERC's determination to the contrary is reasonable and due deference. *See Tenn. Gas Pipeline Co. v. FERC*, 400 F.3d 23, 27 (D.C. Cir. 2005) ("Th[is] court properly defers to policy determinations invoking the Commission's expertise in evaluating complex market conditions."); *SMUD*, 616 F.3d at 542 (same under the Federal Power Act).

CONCLUSION

For the foregoing reasons, the Petitions for Review should be denied.

Respectfully submitted,

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CERTIFICATE OF COMPLIANCE

In accordance with Fed. R. App. P. 32(a) and this Court's Rule 32(e)(2)(B), I certify that the Initial Brief for Respondent has been prepared in a proportionally spaced typeface (using Microsoft Word 2010, in 14-point Times New Roman) and contains 9,090 words, not including the tables of contents and authorities, the glossary, and the certificates of counsel.

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November 20, 2017

CERTIFICATE OF SERVICE

In accordance with Fed. R. App. P. 25(d), and the Court's Administrative Order Regarding Electronic Case Filing, I hereby certify that I have, this 20th day of November 2017, served the foregoing upon the counsel listed in the Service Preference Report via email through the Court's CM/ECF system.

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